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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,103	12/31/2001	Byung-kyu Lee	030681-351	5887
21839	7590	01/12/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			RICKMAN, HOLLY C	
POST OFFICE BOX 1404				
ALEXANDRIA, VA 22313-1404			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

10/032,103

Applicant(s)

LEE, BYUNG-KYU

Examiner

Holly Rickman

Art Unit

1773

~The MAILING DATE of this communication appears on the cover sheet with the correspondence address ~

THE REPLY FILED 08 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.  
2. ☐ The proposed amendment(s) will not be entered because:  
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ they raise the issue of new matter (see Note below);  
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.  
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.Claim(s) objected to: 9,15 and 19.Claim(s) rejected: 1-8,10-14,16-18,20 and 21.Claim(s) withdrawn from consideration: none.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.  
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.  
10. ☐ Other: \_\_\_\_\_

Holly Rickman  
Primary Examiner  
Art Unit: 1773

Continuation of 3. Applicant's reply has overcome the following rejection(s): the rejection of claims 1-4,6-7,9,12-13,15,17, and 19 under 35 USC 102(e) or under 35 USC 103(a) as being anticipated by or unpatentable over Ikeda et al (US 6468670).

Continuation of 5. does NOT place the application in condition for allowance because: Applicant's arguments with respect to the function of the Ti layer taught by Lambeth et al. are not persuasive. Applicant argues that the Ag layer underlying the Ti layer serves to enhance epitaxial growth of the Ti layer and as a result, the perpendicular magnetic recording layer as well. However, Applicant's attention is directed to col. 21 lines 4-40. The particular portion cited by Applicant's seems to suggest, when read on its own, that the Ti layer is epitaxially grown on the Ag layer. However, the rest of the section in col. 21 indicated otherwise. Specifically, lines 4-17 state that Ti acts as a wetting layer "that eliminates the influence of the orientation of the substrate or previously deposited layer under the Co-based layer." Thus, it is clear that the Ti layer is, in fact, a crystal growth discontinuation layer.



**HOLLY RICKMAN**  
**PRIMARY EXAMINER**